Blood example

Code

```c
#include <stdio.h>

int isdigit(char *input){
    int i = 0;
    while (input[i] != '\0') {
      // check if element i of a string is a character based on ASCII code.
      if (!(input[i] >= 48 && input[i] <= 57)) return 1;
      i++;
    }
    return 0;
}

int convertToInt(char *str){
  int i = 0, result = 0;
  while (str[i] != '\0') {
    // Each i element in str variable is subtracted by 48 ('0' character on ASCII)
    // to get the real number and then added to result variable.
    result = result * 10 + str[i] - '0';
    i++;
  }
  return result;
}

int main() {
  char input[10]; // Initialize a string called 'input'
  scanf("%s", input); // Get input

  if (isdigit(input) == 1) { printf("Input contains character(s) other than numbers\n"); return 1; }

  // Convert input to integer
  int systolicBloodPressure = convertToInt(input);

  if (systolicBloodPressure > 140) printf("Hypertension\n");
  else if(systolicBloodPressure > 120) printf("Pre-hypertension\n");
  else if(systolicBloodPressure > 90) printf("Normal\n");
  else printf("Hypotension\n");

  return 0;
}
```

Output

```
./blood
> 126
Pre-hypertension

./blood
> 1A5
Input contains character(s) other than numbers
```

Practice 1

Code

```c
#include<stdio.h>

int main(void){
    int noise;

    scanf("%d", &noise);
    if(noise <= 50) printf("Quiet\n");
    else if(noise <= 70) printf("Intrusive\n");
    else if(noise <= 90) printf("Annoying\n");
    else if(noise <= 110) printf("Very Annoying\n");
    else printf("Uncomfortable\n");

    return 0;
}
```

Output

```
> 80
Annoying
```

Practice 2

Code

```c
#include<stdio.h>

int main(void){
    int grade;

    scanf("%d", &grade);
    if(grade >= 55)
        printf("Passed\n");
    else {
        printf("Failed\n");
        printf("You must take this course again\n");
    }
    return 0;
}
```

Output

```
> 85
Passed
```

Practice 3

Code

```c
#include<stdio.h>

int main(void){
    char color;

    color = getchar();
    switch(color)
    {
        case 'R': printf("Red\n"); break;
        case 'G': printf("Green\n"); break;
        case 'B': printf("Blue\n"); break;
    }

    return 0;
}
```

Output

```
> R
Red
```

Practice 4

Code

```c
#include<stdio.h>

int main(void){
    int ph;
    printf("Kandungan PH: ");
    scanf("%i", &ph);

    if (ph > 7) {
        if (ph < 12) {
            printf("Alkaline");
        } else {
            printf("Very Alkaline");
        }
    } else {
        if (ph == 7) {
            printf("Neutral");
        } else if (ph > 2) printf("Acidic");
        else printf("Very Acidic");
    }
}
```

Output

```
> Kandungan PH: 18
Very Alkaline
```

Practice 5

Code

```c
#include<stdio.h>

int main(void){
    int lumens, watts;
    scanf("Watts: %i", &watts);
    switch(watts) {
        case 15: lumens = 125; break;
        case 25: lumens = 215; break;
        case 40: lumens = 500; break;
        case 60: lumens = 880; break;
        case 75: lumens = 1000; break;
        case 100: lumens = 1675; break;
        default: lumens = -1; break;
    }
    printf("%i", lumens);
}
```

Output

```
./practice5
> Watts: 25
215

./practice5
> Watts: 78
-1
```

Practice 6

Code

```c
#include<stdio.h>

int main(void){
    int wind;
    char* category;
    printf("Wind speed: ");
    scanf("%i", &wind);
    if (wind < 25) category = "Not a strong
        ↪ wind";
    else if (wind >= 25 && wind < 39)
        ↪ category = "Strong wind";
    else if (wind >= 39 && wind < 55)
        ↪ category = "Gale";
    else if (wind >= 55 && wind < 73)
        ↪ category = "Whole gale";
    else category = "Hurricane";

    printf("Category: %s\n", category);
}
```

Output

```
./practice6
> Wind speed: 75
Category: Hurricane

./practice6
> Wind speed: 30
Category: Strong wind
```